

Warm Up

Write down the next three terms in each sequence.

a 3, 8, 13, 18, ...

c 2, 3, 5, 8, 12, ...

e 1, -1, 1, -1, 1, ...

g 100, 75, 50, 25, ...

b 1, 2, 3, 5, 8, ...

d 1, 2, 4, 8, ...

f $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \dots$

Write down the first three terms of these sequences. Remember that $n \in \mathbb{Z}^+$.

a $u_n = n + 1$

$$u_1 =$$

$$u_2 =$$

$$u_3 =$$

b $a_n = 3n + 1$

c $b_n = 2^n$

d $t_n = 4 - 0.5n$

Write down a general formula for the n th term of each sequence.

a 1, 4, 9, 16, ...

b 1, 8, 27, 64, ...

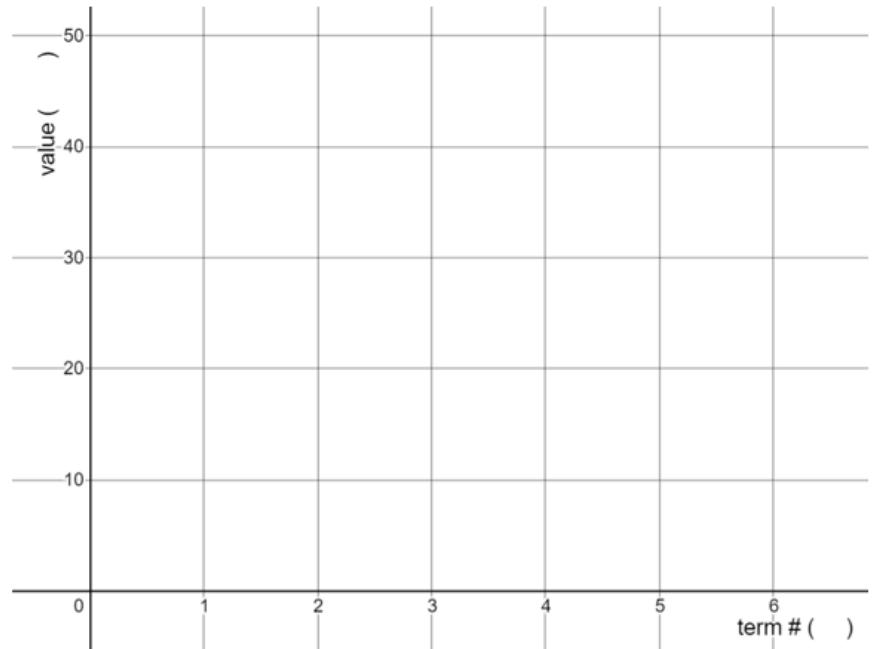
$$u_n =$$

c 1, 2, 3, 4, ...

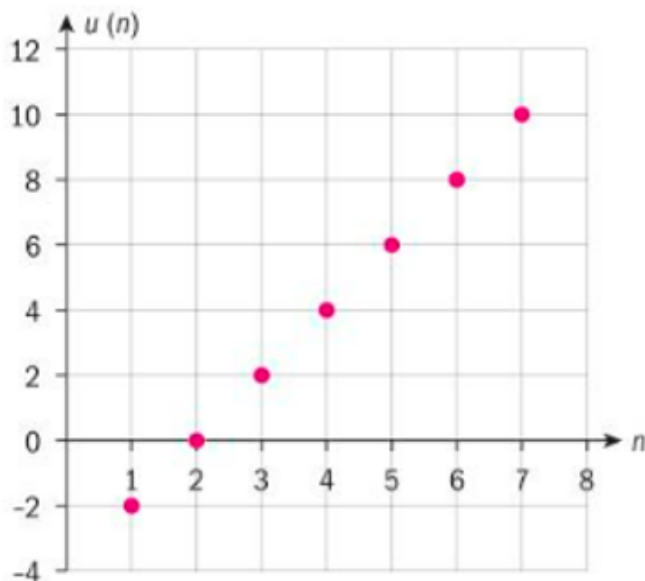
d $2, 1, \frac{2}{3}, \frac{1}{2}, \frac{2}{5}, \dots$

Arithmetic Sequences

3, 11, 19, _____, _____, _____



The diagram shows part of the graph of a sequence u_n .



- a** Explain why this sequence is arithmetic.
- b** Write down the common difference of this sequence.
- c** Write down the first term of the sequence.
- d** Write down the general term of the sequence.
- e** Determine whether or not the point (20, 36) lies on the graph of this sequence.